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Side Effects on Pregnant Women and Evaluation of Prognostic Results after Three Years

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Abstract: Background: The negative results of pregnancy are the main cause of health and psychological problems resulting from mothers and long-term mothers in countries with low or medium incomes. Objective: This study was analyzed outcomes related to side effects on pregnant women and assessed prognostic results in the long term. Patients and methods: We conducted a cross-sectional study which specialized in patients with pregnant women for a period between April 6, 2022, to August 17, 2023, as their ages ranged between (25 and 45) years who underwent delivery operations in different hospitals in Iraq. This study determined the negative results of pregnant women affecting the surrender of pregnant women in terms of psychological problems such as anxiety, depression, health problems, and post-process complications. Women underwent a questionnaire to measure the quality of healthy life from the physical, psychological, and emotional side and practice activities on a daily basis. This study recorded the predictions related to women in terms of the results of postpartum diseases of pregnant women. Results: Pregnant women infected with COVID-19 were 40 patients and were not infected with a profile 19 were 73 patients, women smokers during pregnancy were 26 women, and pregnant women had multi-cyst ovarian syndrome 46 patients. This study showed the presence of severe disorders in the biochemical levels that were conducted on patients during and after delivery and the most prominent of which was Glucose was (74.30 ± 3.16) MG/DL, HDL-C (MG/DL) IT was 64.2 ± 5.8, LDL-C (MG /DL) was 115.21 36.92 during surgery either GLUCOS, (MG/DL) was 66.45 ± 13.85, HDL-C (MG/DL) was 58.6 ± 7.3 and LDL-C (MG/DL) was 87.71 ± 24.33, and the most prominent complications postpartum was hemorrhage with 37 women and infection with obstructed labor with 50 women, eclampsia with 23 women, the most prominent psychological and physical disorders were psychosis with 26 and anxiety with 23 and fatigue and sleep deprivation with 39, with pain rates in the first minute were severe with 7.65 ± 1. 30, 5 min was moderate with 4.67 ± 1.02. Conclusions: Our study on our negative results showed greatly linked to weight, poor birth, obesity, HIV, glucose rate disorders, blood pressure, and bleeding, affecting pregnant women, which has exacerbated the poor quality of healthy life

Keywords: Pregnancy women; biochemical test; types of delivery; postoperative complications; prognostic factors.

INTRODUCTION

Pregnancy outcome, also known as a birth outcome, refers to the ultimate consequence of the fertilisation events that take place in the newborn child from the age of viability (28 weeks) through the first weeks of life (Yeshialem, E. *et al*., 2019;CSA 2013). The outcomes of pregnancies found vary and might which include the delivery of a living infant, the death of the infant in the womb, miscarriage, termination of pregnancy, as well as the death of the baby postoperatively in the short term (WHO and B. W. UNFPA . 2016). The adverse outcomes of pregnant women indicate a wide range of health issues which affect the mother, the infant, labour, and delivery, as well as the postpartum period. Common pregnancy complications encompass antepartum haemorrhage (APH), hyperemesis gravidarum, postpartum haemorrhage (PPH), stillbirth, low birth weight, premature rupture of membranes (PROM), obstructed labour, hypertensive disorders of pregnancy, prematurity, uterine rupture, and puerperal sepsis (CSA, 2016; Mekonnen, W., & Gebremariam, A. 2018; Khanal, V. *et al*., 2016).

According to data from the World Health Organization (WHO), this organization found a daily occurrence of almost 809 deaths among women worldwide because of difficulties during pregnancy, delivery, or the postpartum period (Tamirat, K. S. *et al*., 2021; Asiki, G. *et al*., 2015). During the year 2019, the number of women who lost their lives during and after pregnancy amounted to over 290,000 (Chaibva, B. V. *et al*., 2019).

Deaths are mostly concentrated in poor and lower-middle-income nations, with Ethiopia being a prominent example, accounting for 95% of all fatalities (Abdo, R. A. *et al*., 2016). Sub-Saharan Africa accounted for around 66% (196,000) of the total number of maternal fatalities worldwide,

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whilst Southern Asia accounted for over 20% (58,000) (Degno, S. *et al*., 2021; Tsegaye, B. and Kassa, A. 2018). Nevertheless, maternal mortalities provide only a partial account of the situation (Cherie, N. and Mebratu, A. 2018). Each instance of maternal mortality is accompanied by an additional 24 to 32 cases of women experiencing lasting impairments, which include obstetric fistula, infections, uterine rupture, or pelvic inflammatory disease (Worku A. G., *et al*., 2013).

Notwithstanding all interventions and endeavours, Ethiopia's maternal mortality rate (MMR) persists at a significant and concerning level (Yimer, N. B. *et al*., 2022). Annually, more than 26,000 women and girls die as a result of issues associated with pregnancy (Kebede, A. S., *et al*., 2018). Furthermore, a yearly projection of over 502,000 Ethiopian women and girls may have disabilities resulting from problems during pregnancy and delivery (Addisu, D. *et al*., 2012). The most immediate factors contributing to maternal mortality in Ethiopia include pregnancy problems, including haemorrhage (30.2%), obstructed labor or a ruptured uterus (24%), hypertension caused by pregnancy (17%), sepsis of the puerperal cavity (15.40%), and unsafe abortion (8.43%) (Getiye, Y., & Fantahun, M. 2017; Tadese, M. *et al*., 2021).

PATIENTS AND METHODS

For a period between April 6, 2022, and August 17, 2023, we conducted a cross-sectional study that focused greatly on the side effects on pregnant women and evaluated the prognostic results. One hundred thirteen samples of the clinical data of different hospitals in Iraq were recruited, and their ages ranged between 25 and 45 years. Our results have distributed all the characteristics of demographic data to pregnant women in terms of age, sex, accompanying diseases, body mass index, COVID-19, smoking factor, and polycystic ovarian syndrome.

This study enrolled clinical data related to patients during delivery, which includes gestational age, the type of delivery, which included vaginal delivery and cesarean section, the weight of the fetus, the previous date of pregnancy and acceptance in the central care unit, the number of fetuses in terms of delivery in one fetus or twins, the duration of the hospital stay and time hospitalization, blood loss, and death rate.

Laboratory tests and diagnoses were performed for pregnant women who were subjected to delivery, as they relied on tests during delivery and post-delivery in terms of diastolic blood pressure, systolic blood pressure, glucose, triglycerides, HDL-C, LDL-C, and total cholesterol.

The negative results of the post-delivery pregnant women were identified, as the scale of 0 to 10 was carried out to measure the degrees of pain in the post-operative women. Moreover, the phenomena to which women were subjected post-delivery were identified in terms of psychological problems such as anxiety, depression, and health problems, as well as any complications affecting the quality of life for patients in the long term.

Our study assessed prognostic results after three years through women who underwent a questionnaire that they conducted to measure the quality of a healthy life using a WHOQOL scale from (0-100) where 0 indicated the worst and 100 indicated the best in terms of physical health, psychological, social relationships, environment, overall QoL and general health, which reflected these risks to their healthy life. In addition, this study has registered the indicators associated with outcomes in long-term postpartum outcomes for pregnant women. Regarding the standards of exclusion, our study has excluded some criteria that include patients who underwent previous surgeries, hormonal changes, or women who have been over 45 years old or fewer than 25 years old. Our data was organized by these results and designed by the program SPSS.

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RESULTS

Table 1: Clinical demographic characteristics of pregnant women observed in this study

Characteristics	N [113]	Percentage [%]
Age		
25 – 29	26	23.01%
30 – 34	37	32.74%
35 – 39	20	17.70%
40 – 45	30	26.55%
BMI [Kg/m2]		
28 – 31	18	15.93%
32 – 35	69	61.06%
36 – 39	26	23.01%
Comorbidities		
Hypertension	24	21.24%
Diabetes mellitus type 2	29	25.66%
Cardiovascular disease	25	22.12%
Thyroid disease	7	6.19%
kidney disease	10	8.85%
Acute asthma	18	15.93%
Covid-19 during pregnancy		
Yes	40	35.4%
No	73	64.6%
Smoking during pregnancy		
Yes	26	23.01%
No	87	76.99%
Polycystic ovary syndrome (PCOS)		
Yes	46	40.71%
No	67	59.29%

Table 2: Delivery results for pregnant women.

Variables	Patients' outcomes	Percentage [%]
Gestational age (week)	37.2 ± 1.8	
Type of delivery		
Vaginal delivery	88	77.88%
Cesarean section	25	22.12%
Fetus weight [g]		
1000 - 1500	57	50.44%
1501 – 2000	36	31.86%
2001 – 2500	20	17.70%
Previous history of pregnancy		
0	18	15.93%
1	45	39.82%
2	31	27.43%
3	19	16.81%
ICU admission		
Yes	20	17.70%
No	93	82.30%
Number of fetuses		
Singleton	111	98.23%
Twin	2	1.77%
Length of stay [Days]		
Vaginal delivery, hours	36 ± 12	
Cesarean section, days	3 ± 1	
Recovery time, [Week]		
Vaginal delivery	2.1 ±0.3	
Cesarean section	5.2 ± 1.4	
Intraoperative blood loss		
Yes	15	13.27%
No	98	86.73%
Mortality rate		
Yes	9	7.96%
No	104	92.04%

Table 3: Biochemical test outcomes of pregnant women during and after delivery.

Biochemical variables	During delivery, [mean ± SD]	After delivery, [mean ± SD]
Systolic pressure (mm Hg)	114.3 ± 7.3	124.16 ± 4.5
Diastolic pressure (mm Hg)	77.32 ± 14.6	82.56 ± 6.31
Glucose (mg/dl)	74.30 ± 3.16	66.45 ± 13.85
Tc (mg/dl)	214 ± 21.11	204.60 ± 15.62
Tg (mg/dl)	192.56 ± 83.10	168 ± 40.46
HDL-c (mg/dl)	64.2 ± 5.8	58.6 ± 7.3
LDL-c (mg/dl)	115.21 36.92	87.71 ± 24.33

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Table 4: Adverse results related to pregnant women postpartum.

Complications	Number of patients	Percentage [%]
Postpartum pain, Apgar score		
1 min	7.65 ± 1.30	
5 min	4.67 ± 1.02	
10 min	3.88 ± 0.75	
Fetus death	12	10.62%
Psychological and physical status		
Depression	15	13.27%
Anxiety	23	20.35%
Psychosis	26	23.01%
Physical discomfort	10	8.85%
Fatigue and sleep deprivation	39	34.51%
Postpartum complications		
hemorrhage	37	32.74%
Infection	17	15.04%
Anemia	15	13.27%
Uterine rupture	4	3.54%
Sepsis	8	7.08%
Eclampsia	23	20.35%
Obstructed labor	50	44.25%

Table 5: Assessment of quality of life for pregnant women after delivery

Variables	After the first year	After the second year	After the third year
Mothers			
Physical health	63.10 ± 13.13	61.55 ± 11.24	60.02 ± 9.43
Psychological	75.45 ± 5.53	70.47 ±7.88	67.12 ± 6.85
Social relationships	61.24 ± 6.89	60.44 ± 5.20	60.10 ± 4.21
Environment	60.11 ± 7.65	58.62 ± 5.8	52.71 ± 4.66
Overall QoL and general health	62.44 ± 8.76	57.87 ± 7.94	54.10 ± 7.65
Fetus			
Physical health	70.3 ± 4.5	68.4 ± 3.3	69.7 ± 5.8
Psychological	76.6 ± 5.5	71.1 ± 4.6	70.3 ± 1.1
Social relationships	78.3 ± 6.8	75.5 ± 5.7	76.5 ± 8.6
Environment	70.1 ± 8.2	66.3 ± 6.6	62.10 ± 5.2
Overall QoL and general health	72.13 ± 2.5	70.1 ± 2.9	71.2 ± 1.5

Table 6: Independent predictors associated with adverse long-term postpartum outcomes for pregnant women.

Variables	COR 95 % CI	P-value
Age		
25 – 29	1.03 [0.46 – 2.06]	0.042
30 – 34	1.73 [1.33 – 2.14]	0.031
Fetal weight		
1000 - 1500	1.60 [1.35 – 1.95]	0.048
1501 – 2000	1.58 [1.46 – 2.01]	0.025
2001 – 2500		
Number of fetuses		
Singleton	1.58 [1.12 – 1.85	0.044
Twin	1.65 [1.03 – 2.88]	0.021
Psychological and physical status		
Psychosis	1.43 [0.5 – 2.84]	0.0486
Fatigue and sleep deprivation	1.84 [1.33 - 2.66]	0.0401
Anxiety	1.57 [1.02 – 2.13]	0.0378
Postpartum complications		
hemorrhage	1.75 [1.33 – 2.50]	0.0476
Obstructed labor	1.63 [1.46 – 1.88]	0.0455
Anemia	1.75 [1.04 – 2.0]	0.0353
Sepsis	3.5 [1.56 – 8.7]	0.0311
Other factors		
HIV status	1.52 [0.33 – 4.78]	0.046
Breast cancer	2.10 [0.7 – 5.53]	0.02
Pregnancy diabetes	1.85 [0.42 – 4.21]	0.031

DISCUSSION

Clinical results showed that women (aged 30 - 34) years were considered the most submission to delivery at a rate of 32.74% and the higher body mass index (32 - 35) at a rate of 61.06% of pregnant women, which shows excessive obesity,

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and most patients had accompanying diseases The most prominent of which is Hyperterance, Diabets Mellitus Type 2, Cardiovascular Disease, pregnant women with coffee 19 were 40 patients and were not infected with a profile of 19 were 73 patients, women smokers during pregnancy were 26 women, and pregnant women had multi -cyst ovary syndrome of 46 patients.

Our results were found by Gestational Age were 37.2 ± 1.8, Vaginal Delivey were 88 women, and 25 were undergoing a cesarean section, the weight of the fetal the most declining was (1000 - 1500) grams and included 57 pregnant women who had a previous in one fetus were the most percentage of the total rate of patients and included 39.82%, our results also found the presence of 20 women who entered the central care, as there are two things from the total rate of women who gave birth to twins, and the duration of survival is pregnant women who underwent vaginal delivery in the hospital (36 ± 12) hours. The hospital was (3 ± 1) day, and I also found that 15 women lost blood during the operation, with a death rate of 9 women.

This study showed the presence of acute disorders in the biochemical levels that were conducted on patients during and after delivery. As for biochemical tests during delivery, our results were recorded that systolic Pressure was (114.3 ± 7.3) MM HG, diastolic Pressure was (77.32 ± 14.6) MM HG, Glucose was (74.30 ± 3.16) MG/DL, TC (MG/DL) It was 214 ± 21.11, TG (MG/DL) was 192.56 ± 83.10, HDL-C (MG/DL) was 64.2 ± 5.8, LDL-C (MG/DL) was 115.21 36.92. As for the biochemical tests after delivery, our results were recorded as Systolic Pressure (MM HG) was 124.16 ± 4.5, and Diastolic Pressure (MM HG) was 82.56 ± 6.31, and GLUCOS, (MG/DL) was 66.45 ± 13.85, and TC (MG/DL) 204.60 ± 15.62 and TG (MG/DL) was 168 ± 40.46 and HDL-C (MG/DL) was 58.6 ± 7.3 and LDL-C (MG/DL) was 87.71 ± 24.33.

In addition, our study identified the negative results that affected the patients negatively, which included and found pain rates in the first minute were severe with 7.65 ± 1.30, 5 Min was moderate with 4.67 ± 1.02, and 10 min was low with 3.88 ± 0.75, with The presence of the fetal deaths was 12 fetuses, the most prominent psychological and physical disorders were psychosis with 26 and anxiety with 23 and Fatigue and Sleep Deprivation with 39, the most prominent complications postpartum were Hemorrhage with 37 women and Infection with Obstructed Labor with 50 women, and Eclampsia with 23 women. Our study showed the negative aspects that affected the quality of the life of pregnant women after the operation, most notably Physical Functioning, and included 60.02 ± 9.43; Psychological Functioning and included 74.12 ± 6.85; emotional Functioning was 60.10 ± 4.21; practice ACTIVITIES was 52.71 ± 4.66. This study resulted in independent propaganda, which appeared on the possibility of breast cancer, pregnancy poisoning, or pregnancy diabetes.

Previous studies on negative outcomes in pregnancy have shown that the risk factors affecting the lives of mothers and fetuses is low weight, complications, bleeding, high blood pressure, low glucose disorders, and possible infection and malnutrition with serious diseases that negatively affect and cause deaths (Sikder, S. S. *et al*., 2014; Kassahun, E. A. *et al*., 2019; Balkus, J. E. *et al*., 2021). Another study showed that mothers who give birth to a fetus with low birth weight are 65% more susceptible.

CONCLUSION

This study showed that the size of negative results is high, which strengthened its negative association with weight, poor birth, obesity, and HIV in pregnant women. Our results recorded a high percentage of complications in pregnant women, the most prominent of which was indulging, bleeding, infection, and anemia. We noticed in our study on the basis of disturbances in the rates of biochemical tests in women during pregnancy, the most common and influential factors on pregnant women are cholesterol, total cholesterol, high blood pressure, and low glucose in the blood, which weakened its quality for women after birth at the physical and psychological level. Depending on the results we have reached, this study expected that these negative results can be caused by breast cancer, pregnancy, diabetes, or other patients.

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